

**IN THE CLAIMS:**

1. (Currently Amended) A medical image analysis process which utilizes information contained in at least one medical image, the process comprising:

deriving a quantitative evaluation including a difference between an ideal image unaffected by artefacts and the at least one medical image affected by artefacts;

delivering the quantitative evaluation as an output,

performing an error analysis in order to provide information relating to the accuracy of the quantitative evaluation, said analysis yielding a result, and,

delivering the result as a further output.

2. (Previously Presented) The medical image analysis process, as claimed in claim 1, characterized in that the error analysis comprises steps wherein an image artefact which contributes to the image analysis process is identified, wherein the image artefact has an influence on the accuracy of the quantitative evaluation, which influence is calculated, and the results of the calculation of the influence on the accuracy of the quantitative evaluation is incorporated into the delivered further output.

3. (Previously Presented) The medical image analysis process, as claimed in claim 1, characterized in that the error analysis comprises steps wherein an image processing step which contributes to the image analysis process is identified, wherein the image processing step has an influence on the accuracy of the quantitative evaluation is calculated, which influence is calculated, and the results of the calculation of the influence on the accuracy of the quantitative evaluation is incorporated into the delivered further output.

4. (Previously Presented) The medical image analysis process, as claimed in claim 2, characterized in that the results of the calculation of the influence on the accuracy of the quantitative evaluation is stored prior to incorporation into the delivered output.

5. (Previously Presented) The medical image analysis process, as claimed in claim 4, characterized in that, the results of the calculation of the influence on the accuracy of the

quantitative evaluation is stored in at least one of a multidimensional table, a look up table, or a formula.

6. (Previously Presented) The medical image analysis process, as claimed in claim 2, characterized in that, the identified image artefact which contributes to the image analysis process is at least one of noise, partial volume effect, sampling rate, inhomogeneity within the medical imaging process or an artefact due to patient motion.

7. (Previously Presented) The medical image analysis process, as claimed in claim 3, characterized in that, the identified image processing step which contributes to the image analysis process is at least one of registration, outlier classification, contour placement or segment placement.

8. (Previously Presented) The medical image analysis process, as claimed in claim 1, characterized in that, the medical image analysis process which utilizes information contained in the at least one medical image is the assessment of cardiac perfusion data, and the quantitative evaluation which is derived from the medical image analysis process and delivered as the output is the myocardial perfusion reserve index.

9. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps, for a medical image analysis process which utilizes information contained in at least one medical image, the method steps comprising:

- deriving a quantitative evaluation including a difference between an ideal image unaffected by artefacts and the at least one medical image affected by artefacts
- delivering the quantitative evaluation as an output,
- performing an error analysis in order to provide information relating to the accuracy of the quantitative evaluation, said analysis yielding a result, and,
- delivering the result as a further output.

10. (Cancelled)